REMARKS

Applicant recognizes with appreciation that the Examiners had a personal interview with the representative of Applicant on July 18, 2005. During the interview, the parties discussed issues related to the definition of "edge" of the beta-strand forming section of the claimed peptide compound and scope of then present invention with regards to composition and length of the peptide. The Examiners understood Applicant's clarification of the term "edge" and agreed that the proposed amendment overcame the rejection based on the Quibell reference.

In this Amendment, Applicant has amended Claims 1 – 3 and added new Claims 46 – 47. Claim 1 has been amended and Claims 46 – 47 have been added to specify various embodiments of the present invention and overcome the rejection. The support for the newly added claims can be found throughout the specification, for example, page 19 lines 6 – 11. It is respectfully submitted that no new matter has been introduced by the amended and newly added claims. All claims are now present for examination and favorable reconsideration is respectfully requested in view of the preceding amendments and the following comments.

REJECTIONS UNDER 35 U.S.C. § 112 SECOND PARAPGRAPH:

Claims 1 – 28 and 43 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is respectfully submitted that the rejections have been overcome by the presently submitted amendments.

Claim 1 has been amended to clearly define the embodiments of the present invention. In the amended Claim 1, the phrase "favourable non-covalent interactions" has been deleted. Claims 2 and 3 have been clearly defined by adding the expression that "when there are two or more successive Nα-substituted amino acid residues". Therefore, the scopes of these claims are

clear to a person of ordinary skill in the art. The dependent Claims 2 – 28 and 43 are clear due to their dependency on Claim 1.

Therefore, the rejection under 35 U.S.C. § 112, second paragraph, has been overcome. Accordingly, withdrawal of the rejections under 35 U.S.C. § 112, second paragraph, is respectfully requested.

REJECTIONS UNDER 35 U.S.C. § 102:

Claims 1, 4 – 13, 15 – 18 and 22 – 28 have been rejected under 35 U.S.C. § 102 (b) as allegedly being anticipated by Quibell M. et al. (J. Chem. Soc. Perkin. Trans (1995)1, 2019-2024), hereinafter Quibell. Claims 1, 4 – 18, 22 – 28 and 43 have been rejected under 35 U.S.C. § 102 (e) as allegedly being anticipated by Kelly, J.W. et al. (US 6,034,211), hereinafter Kelly.

Applicant traverses the rejection and respectfully submits that the present-claimed invention is not anticipated by the cited reference. As indicated above, the amended Claim 1 further clarifies the scope of the embodiments of the present invention. More specifically, the amended Claim 1 defines "[A] chemical compound or composition comprising a peptide, wherein:

(a) said peptide comprises a β-strand-forming section of peptide consisting of four to sixteen consecutive α-L-amino acid residues and encompassing at least 50% of said peptide, none of the α-L-amino acid residues within the β-strand-forming section of peptide being proline, except at very ends of the β-strand-forming section of peptide;

(b) each of the consecutive α-L-amino acid residues in the β-strand-forming section of the peptide has a side chain;

(c) said β-strand-forming section of peptide forms a .-strand having a peptide backbone which takes on the form of an extended ribbon having two edges, a first edge which associates with a target β-strand formed by a separate peptide-containing molecule and a second edge, such that the NH and CO components of successive α-L-amino acid residues lie along either the first edge or the second edge of the ribbon, the first edge and second edge corresponding to two opposite edges of the peptide planes of the peptide backbone;

(d) at least one of the Nα-atoms within the peptide backbone of the β-strand is Nα-substituted with an Nα-substituent, such that one or more Nα-substituent lie along only the second edge and sterically hinder the association of the second edge with another β-strand; and

(e) the first edge remains free of Nα-substituents, and is not prevented from associating with the target β-strand formed by a separate peptide-containing molecule."

Claims 4 – 18, 22 – 28 and 43 also include these features due to their dependency on Claim 1.

Applicant respectfully submits that the Examiners agreed that Quibell would not anticipate Claim 1, which is substantially similar to the proposed amendment discussed during the interview. More specifically, except the difference in length from Quibell, Claim 1 clearly defined that "said β-strand-forming section of peptide forms a β-strand having a peptide backbone which takes on the form of an extended ribbon having two edges corresponding to two opposite sides of the peptide planes of the peptide backbone, a first edge which associates with a target β-strand formed by a separate peptide-containing molecule and a second edge, such that the NH and CO components of successive α-L-amino acid residues lie along either the first edge or the second edge of the ribbon." Therefore, it is clear that the "edge" is not N- or C-terminal region of compounds disclosed in Quibell as alleged. Applicant respectfully submits that it is incorrect to refer to the N-terminal region (residue 1 to 22) of the peptide disclosed in Quibell as being equivalent to "the first edge of the instant application" and the C-terminal region (residue 25 – 43) of the peptide disclosed in Quibell as being equivalent to "the second edge β-strand-forming section of the instant application."

In addition, the amended Claim 1 includes the limitation that "(e) the first edge remains free of Nα-substituents, and is not prevented from associating with the target β-strand formed by a separate peptide-containing molecule." The unsubstituted edges of the peptides disclosed in the Quibell are only capable of associating intramoleculely when the peptide forms a β-hairpin. There is no intermoleculear association of the Quibell compounds. On the contrary, they are specifically designed not to form intermolecular association (col. 1, 2nd paragraph of Quibell).

Regarding the Kelly reference, at first, Kelly does not disclose or suggest the feature that "said β-strand-forming section of peptide consisting of four to sixteen consecutive α-L-amino acid residues and encompassing at least 50% of said peptide." The molecules in Kelly lack this feature because the recognition and blocking strands are linked by a β-turn, which "is not counted among the α-amino acid residues" (col. 11, lines 1 – 2 of Kelly). The Examiner alleges that the recognition strand and blocking strands of the Kelly compounds relate to the first and second edges referred to in Claim 1. However, this is not the case because the β-strand forming section of the peptide (which forms a β-strand having two edges) must consist of four to sixteen consecutive α-L-amino acid residues (see page 9, lines 8 – 11 for definition of "consecutive" in the specification) and yet the presence of a β-turn in the Kelly compounds prevents the amino acids of the two strands from being consecutive.

Similar to Quibell, Kelly does not teach or suggest the feature that "the first edge remains free of Nα-substituents, and is not prevented from associating with the target β-strand formed by a separate peptide-containing molecule." The compounds in Kelly do not have any edges that are both free of Nα-substituents and able to associate with a target β-strand formed by a separate peptide-containing molecule. On the contrary, like the Quibell compounds, the Kelly compounds are specifically designated to "prevent oligomerisation of an aqueous solution of the mimetic" (col. 10, lines 62 – 63 of Kelly). The only interactions shown in the Kelly paper are intramolecular ones between the recognition and blocking strands of the same molecule.

In addition, both Quibell and Kelly compounds are relatively bulky Nα-substituted compounds comprising a β-turn, which are specifically designed to prevent association with separate peptide containing molecules. This is in complete contrast to the relatively small compounds of the present invention which must be able to both associate with a separate peptide containing molecule and then block any further association.

Therefore, the newly presented claim is not anticipated by Quibell or Kelly and the rejection under 35 U.S.C. § 102 has been overcome. Accordingly, withdrawal of the rejection under 35 U.S.C. § 102 is respectfully requested.

Having overcome all outstanding grounds of rejection, the application is now in condition for allowance, and prompt action toward that end is respectfully solicited.

Respectfully submitted,

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